



The Northern Nigeria Medical Report for 1909.

As in former years, the vital statistics of the European resident population only are given, it being impossible in the absence of any system of registration of births and deaths of natives to include them.

The average number of Europeans resident in the Protectorate during the year—including both officials and non-officials, but excluding those engaged on the Northern Extension of the Lagos Railway—was 544, of whom 438 were officials and 106 non-officials, 527 males and 17 females.

The native population is estimated at approximately 7,000,000.

There were 13 deaths from all causes among the Europeans during the year—8 officials and 5 non-officials—one death which occurred on the Northern Extension of the Lagos Railway not being included. Of these, nine died from disease, and four from accident.

The total crude European death rate, calculated on the average resident population, and not corrected for age and sex, was 23.89—or excluding deaths from accident 16.5. The rates from all causes amongst officials and non-officials, being 15.9 and 56.6 respectively.

There were 67 Europeans invalided home during the year, 52 officials and 15 non-officials.

The total invaliding rate per thousand was 123.16—that for officials being 118.7 and for non-officials 141.5.

Estimated population for the year 1909.

Deaths.

Death rate per 1000.

Invalidings.

Invaliding rate per 1000

Europeans.	Total.	Deaths.	Rate per 1,000.	Invalids.	Rate per 1,000.
Total average resident population.	544	13	23.89	67	123.16
Officials.	438	*8	15.9	52	118.72
Non-Officials.	106	†5	56.6	15	141.5

Analysis of statistics.

* Three from accident.
† One from accident.

Last year the average resident European population was 499, and the number of deaths 10—the crude death rate being 20.04 per 1,000. There has been an increase in European population over last year of 45, and in the death rate from all causes of 3.85. This increase in the death rate being accounted for entirely by the large comparative number of deaths from accident—the death rate from disease only, shewing a decrease of 1.5 per 1000. The invaliding rate however was higher by 26.97 per 1000.

Comparison with previous year

The figures dealt with are not sufficiently large to make the comparison of one year with another of much value. Taking the statistics of the six previous years (1903-8) as a basis, the death rate from all causes in the year under review, was below the average by 9.54 per 1000—and the invaliding rate by 15.9 per 1000—the average rates being 33.43 and 139 per 1000 for these years.

	1903	1904	1905	1906	1907	1908	1909
Average European population.	309	322	342	347	424	499	544
Number of deaths.	18	13	10	17	7	10	13
Death rate per 1000.	58.25	40.37	29.23	48.99	16.50	20.04	23.89
Number of Invalids.	43	67	49	55	50	48	67
Invaliding rate per 1000	139.15	208.15	143.27	158.5	117.92	96.19	123.16

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Prevalence of sickness in the different seasons of the year and general character as to mildness or severity of the diseases prevailing.

The most unhealthy months for Europeans were August, June, and January, the number of admissions having been 133, 131, and 130 in these months, as against 88 in July and 101 in December. On the whole there has been no such marked difference in the amount of sickness in the different months, as has occurred in former years.

The general character of the diseases prevailing shewed little change. The case mortality of blackwater fever was lower by 5.57 per cent than last year, and higher by .7 per cent than the average of the last six years, but the number of cases was less in proportion to the population than in any former year. The actual number of admissions being 13 with 3 deaths.

Statistics of Blackwater fever.

	1903	1904	1905	1906	1907	1908	1909
Number of cases.	17	35	18	25	12	14	13
Rate per 1000 of average population.	54.69	108.69	52.63	72.04	28.32	28.05	23.89
Number of deaths.	8	6	4	5	0	4	3
Case mortality per cent.	47.05	17.14	22.2	20	—	28.57	23.07

Relative mortality in different seasons.

There was no great difference in the relative mortality among Europeans in the different seasons. Two deaths occurred in October, but otherwise they were distributed throughout the year.

Amongst the natives, the death rate, so far as can be gathered from the returns of those treated, was much the same throughout the various months. There were no serious epidemics and the general health was good.

Meteorological conditions of the seasons and their probable effect with regard to health.

Zungeru. The rainfall during the year was 58.89 inches, or 10.11 inches more than in 1908, and only 1.5 inches less than the highest on record which was 60.39 inches in 1906. The wettest month was September with 14.27 inches. Rain fell in every month except February and November—the heaviest fall recorded being 2.48 on the 28th July. The mean temperature for the year was 81°F. The maximum shade temperature was 103°F in March, and the minimum 56°F in November. The highest mean temperature was 87°F in March, and the lowest 77°F in August. The mean relative humidity for the year was 70—the highest mean being 89 in July and August, and the lowest 44 in January—calculated from readings taken at 9 a.m.

Lokoja. The total rainfall was 65.14 inches, 21.02 inches more than last year—the wettest month being August with 12.13 inches. The maximum shade temperature was 102°F which was recorded in March, and the minimum 58°F in January. The highest mean temperature was 86° in March and the lowest 78.5 in July, the mean for the year being 82°.

I attach returns for the following stations ; Zungeru, Lokoja, Baro, Ilorin, Yola, Katagum, Ibi, Nafada, Kontagora, Maiduguri, Kano, Sokoto, Geidam, Birnin-Kebbi, Zaria, Bautshi, Ankpa, and Keffi.

The highest shade temperature recorded in the Protectorate during the year was 112°F at Maiduguri in March, and the lowest 35°F at Bautshi in June. The highest mean temperature for the year was at Baro—84°F—and the lowest at Ankpa in the Bassa province, 77°F.

The greatest annual rainfall was that recorded at Ankpa—66.85 inches and the greatest fall in one day, 4.77 inches, at Lokoja on March 25th.

Bautshi shewed the greatest range of temperature 70°F—from 105 in March to 35 in June.

The general direction of the wind throughout the Protectorate was from the South-West during the rainy season, and from the North-East during the rest of the year—the Harmattan lasting generally from November until May.

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With regard to the probable effect of the meteorological conditions on the health of the community—the unusually prolonged and heavy wet season increased the number of cases of malaria and diseases of the respiratory system, both among Europeans and natives, and changed the usual distribution of sickness throughout the year by tending to equalise the various months—there having been no such well marked difference in the sick rate according to the time of the year as has obtained usually in the past.

Malaria. This disease as in former years still accounts for the greatest number of cases of illness in the Protectorate. The total number of admissions among Europeans during the year was 443—an increase over last year of 136—the population having increased from 499 to 544—a relative increase. Blackwater fever has been classified separately for the sake of convenience. The type of disease was in most cases mild and there were no deaths.

Particular diseases that have recurred during the year.

Dysentery. There were 31 cases among Europeans during the year with no deaths, all being of a mild type.

Cerebro-spinal fever. The epidemic which caused such an enormous number of deaths in 1905 seems to have subsided for the time being, two cases only having been reported—both among natives.

Sleeping Sickness. Seven cases were met with during the year throughout the Protectorate, 5 in Bautshi, 1 in Katsena Allah, and 1 in Sokoto. A considerable amount of investigation has been carried on with reference to the past history and present distribution of this disease in Northern Nigeria. Maps were sent out early in the year to all medical officers, with instructions to fill in the distribution of the varieties of Tse-tse Fly met with in their districts, specifying the exact localities in which they were found. From these maps a general fly map of the Protectorate is being compiled. So far as the returns shew up to now, it would appear that *Glossina Palpalis* is found throughout the whole country, wherever there are rivers or streams with wooded banks.

From the reports from the various provinces, sleeping sickness—though only sporadic cases are now found—was responsible in the past for many deaths, and, although native evidence as to the nature of epidemics is not always reliable, there is no doubt that the disease has existed for years in Kabba, Bassa, Bautshi, Katagum, and Sokoto. The policy pursued has been to remove cases when recognised to parts of the country which have been found to be free from fly. The natives themselves send all sufferers out of the towns into the bush. Clearing measures can evidently only be carried out to a very limited extent in a country the size of this, but in Zungeru, Baro, and Lokoja, where it was possible to deal with the question in this way, the clearing of the under-growth and thinning the larger trees has had most gratifying results in diminishing the number of Tse-tse flies found. A report on a tour in Kabba made by Dr C. E. S. Watson with a view to finding if any endemic foci of the disease existed in that province has been already sent in.

Beri-Beri There were no fresh cases during the year. Of the two remaining from the previous year one died and the other recovered.

Syphilis. 437 cases were under treatment—a considerable reduction from previous years—there having been 549 cases treated last year, and 774 the year before.

Yaws. 102 cases were admitted as against 114 in 1908.

Small-Pox. There was an epidemic of this disease at Lokoja—56 cases with no deaths.

The European stations are generally in as good a sanitary condition as circumstances will allow, financial considerations alone in most cases being responsible for deficiencies in this respect. Improvements are being effected from year to year, better quarters are being provided and as railway communication is being established, much ill-health now caused by the hardships and risks of travel will be avoided. As

General Sanitary condition of the Protectorate.

the country is opened up medical officers are visiting the various native towns and villages in their districts with a view to investigating the incidence and nature of diseases met with, and advising the local headmen as to the best measures of effecting improvements in sanitation. One very common cause of the spread of water borne disease in native towns, where wells are used as a source of supply of drinking water, is the depression of the ground round the well mouth, and consequent pollution of the water supply by surface drainage. It is caused by the constant traffic to and from the well and the weight on the unprotected edge, when water is being drawn. This is a condition which can be, and is, easily remedied when discovered, but is mentioned here as an example of the obvious good which may be effected by systematic tours of inspection, and the inculcation of the elementary rules of hygiene.

Sanitary condition of the different stations with reference to water supply, drainage, etc.

Zungeru. The average resident European population during the year was 67.4—63.4 officials, and 4 non-officials. The general health has been good; the number of Europeans admitted to hospital including cases sent in from outstations, was 79, with one death, which occurred from hepatic abscess in the month of August. The sanitary condition of the cantonment is satisfactory, the drainage being effective and the water supply good. The condensing plant used for distilling the water of the Dago for drinking purposes has given a sufficient and excellent supply.

Extensive clearing has been done during the year on the banks of the Dago where it runs through the cantonment, with a view to abolishing the habitat of the Tse-tse fly. All the undergrowth was cut down—the larger timber thinned out, and the lower branches of such trees as were left cut out. So far the results have been satisfactory, and no specimens of the fly have been found for some months.

The native town, the houses in which were too close together, has been opened up by a 50 feet road which has been driven through the middle of the most congested portion, and new building plots granted to the inhabitants of the houses which were pulled down, on an extension of this road to the South. This has effected a considerable improvement, and will make any further outbreak of infectious disease much easier to deal with, and less liable to spread.

Small incinerators for destroying refuse are in process of construction, the system at present in use of burning in open fires being unsatisfactory in the rainy season, and difficult to carry out. The conservancy is on the dry earth system—the contents of the pails being buried in pits at some distance from the station.

Native Hospital. This has been removed from its former site and has now been established in the buildings formerly used as a Freed Slaves' Home. The change has proved a success, both from a point of view of accommodation and convenience. The number of admissions has increased from 740 last year to 1340 in 1909. 2048 out-patients were treated during the year.

Gaol. The premises were kept clean and in excellent order, the diet has been good and sufficient, and the ventilation of the cells is adequate for the number of prisoners for which the gaol was intended to hold. There has been however, a considerable amount of overcrowding during the year: this condition of affairs was slightly improved towards the end of the year but the space available is still insufficient for the number of prisoners kept there. In the dry season the water supply is obtained from the Dago river, and the water used for drinking is boiled before use. For the wet season extra rain water tanks have been provided, which should collect sufficient drinking water to render the gaol independent of the river supply. The average number of prisoners during the year was 287.

Freed Slaves' Home. The compound and dormitories were kept clean, the water supply was good and sufficient, and the food excellent. The Home was removed during the year to Rumasha. The health of the inmates was satisfactory during the time they were in Zungeru, and their general physical condition when they left was very good.

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Lokoja. The average resident European population during the year was 96.8—68 officials and 28.8 non-officials. The general health was good. The number of Europeans admitted to hospital—including cases sent in from out-stations—was 124; there were no deaths. Last year there were 112 admissions with one death, and the year before 122 with two deaths.

The sanitary condition of the cantonment is good, but considerable difficulty has been found in keeping the main earth drains clear of weeds, and their banks of undergrowth. Undoubtedly the best solution of the problem when funds are available will be to cement them, but the cost is prohibitive at present. All the trench latrines formerly used have been done away with, and a pan system introduced in their place. Empty barrels have been supplied to natives for kitchen and other refuse, which are removed daily and the contents burnt.

Native hospital. A new wing has been added to provide for the increase in the number of persons seeking treatment. There were 918 admissions during the year, an increase of 69 over last year, and 2290 out-patients were treated there, as against 1138 in 1908.

Gaol. The premises were kept clean and in good sanitary condition, the diet was ample and of good quality, and the supply of drinking water good and sufficient. The ventilation of the cells is quite adequate for the number of prisoners for which they were designed, but here also considerable overcrowding has occurred during the year. The accommodation is being increased, and will require to be almost doubled.

Kano. The average European population was 25.8, 24.2 officials and 1.6 non-officials. There were 143 patients treated during the year and there was one death—from accident. The general health has been fairly good and has much improved of late.

The water supply is obtained from one large and several smaller springs. The main spring is walled in, and roofed. The water is distilled for drinking purposes.

Refuse is burnt and carried away to outlying farms. The pail and dry earth system is in use. The sanitary condition of the station is good; mosquitoes—chiefly culex—abound during the rains, but everything possible is being done to do away with their breeding places. Mosquito proof rooms are being provided for all Europeans, and the station is being drained as well as the nature of the site will allow.

Baro-Kano Railway. The average number of Europeans employed on the Railway throughout the year was 140, there was one death, and 21 were invalided as against 2 deaths and 9 invalided out of an average population of 120 last year. The death rate was considerably lower than the general death rate of the Protectorate.

A European hospital with a staff of nurses has been opened on Baro hill during the year, for the admission of cases coming down the line, and a well equipped native hospital has been established.

The sanitary condition of Baro has been much improved. *Glossina Palpalis* was found in fair numbers on the high ground, and clearing operations were undertaken on a somewhat extensive scale, with very good results in diminishing their number. The swamp at the foot of the hills has been drained, and all pools which it was found impossible to deal with otherwise were systematically treated with kerosene. Mosquito proof rooms have been supplied to the permanent houses in Baro, and to the various camps up the line, and the borrow pits drained where possible.

There were 2662 successful vaccinations performed during the year. All Government employes, native soldiers, and police, who have not had small-pox, are vaccinated as far as possible, and increasing numbers of the inhabitants of the native towns. The total number of vaccinations performed is less than last year: this is accounted for by the smaller numbers returned from the Baro-Kano Railway, and from Bautshi, where a somewhat extensive outbreak of small-pox in 1908 caused a very large temporary increase in the numbers of natives who came in

Vaccinations performed during the year and condition of the population in respect of protection from small pox.

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for vaccination. The powdered lymph now used has proved much more effective than the tubes of ordinary lymph formerly supplied, and considerable success has been obtained in the more Northern Provinces where all previous attempts had failed. Inoculation is widely practised in most parts of the country in times of epidemic by the natives themselves.

General health during the year.

There were 1384 cases of Europeans on the sick list from all causes during the year throughout the Protectorate, including both intern and extern patients. This is an increase over last year of 418 but is largely due to the inclusion of many trifling ailments which were formerly not returned. A complete list is attached.

There was a large increase in the number of natives under treatment at the various Government hospitals and dispensaries, the total being 22,847 (not including 3271 cases of minor injuries treated on the Railway). Last year the number was 18,032.

There were 3467 pauper patients treated during the year, a return of whom is attached, shewing the numbers at the different stations.

One case of diphtheria—the first recorded in Northern Nigeria—occurred in a European at Sokoto; death occurred on the sixth day of the disease, and a post-mortem examination shewed a typical diphtheritic membrane extending throughout the bronchi.

There were also four cases of German measles in Europeans.

A complete nosological table is appended to this report, shewing all patients treated in the Protectorate, both out-patients at the various stations at which there are medical officers, and all intern and extern patients at Government hospitals.

I attach also the following returns:—

Meteorological returns.

Return of pauper patients treated.

S. W. THOMPSTONE,
Principal Medical Officer.

Zungeru,
April 29th 1910.

METEOROLOGICAL RETURN FOR THE YEAR 1909.

Zungeru.

Lokoja.

MONTH.	TEMPERATURE.				RAINFALL.		Wind	TEMPERATURE.				RAINFALL.		Wind.
	Shade Maximum.	Shade Minimum.	Range.	Mean.	Amount in inches.	Degree of Humidity.		Shade Maximum.	Shade Minimum.	Range.	Mean.	Amount in inches.	Degree of Humidity.	
January ...	100	61	39	80.5	.38	44	N.E.	99	58	41	82	.04	66	N.E.
February ...	101	65	35	84.5	Nil	53	N.E.	100	68	32	85	1.32	66	S.E.
March ...	103	71	32	87	2.02	62	S.W.	102	70	32	86	5.19	64	S.E.
April ...	101	70	31	84	4.66	75	S.W.	97	70	27	84	6.80	70	S.E.
May ...	99	69	30	83	3.27	69	S.W.	97	70	27	82.5	8.20	78	S.E.
June ...	95	69	26	81	6.09	79	S.W.	94	66	28	79.5	6.90	79	S.W.
July ...	91	67	24	78	12.88	89	S.W.	89	69	20	78.5	10.35	81	S.W.
August ...	92	68	24	77	11.24	89	S.W.	92	70	22	79	12.13	80	S.W.
September ...	93	68	25	79	14.27	85	S.W.	91	68	23	79.5	10.37	79	S.W.
October ...	96	67	29	80.5	2.78	82	S.	95	70	25	82.5	2.61	72	S.W.
November ...	100	56	44	80	Nil	62	N.E.	96	70	26	84.5	Nil	69	S.W.
December ...	99	60	39	79	1.30	47	N.E.	95	61	34	80.5	1.23	70	S.E.
Year ...	103	56	47	81	58.89	70	S.W.	102	58	44	82	65.14	73	S.W.

Baro.

Ilorin.

January ...	100	59	41	84.5	1.06	74	S.W.	97	53	44	79.5	.79	65	W.
February ...	103	71	32	87.6	.80	59	S.W.	99	71	28	84	1.18	69	W.
March ...	105	71	34	88.5	3.00	63	S.W.	98	68	30	83.9	5.30	71	S.W.
April ...	101	71	30	85	6.74	72	S.W.	100	67	33	82.3	7.78	76	S.W.
May ...	102	71	31	85	3.49	70	S.W.	98	68	30	81.8	7.12	78	S.W.
June ...	98	67	31	83	6.73	3	S.W.	94	66	28	80.2	8.32	81	S.W.
July ...	96	71	25	81	8.19	77	S.W.	92	67	25	77.3	9.49	81	S.W.
August ...	92	68	24	80	16.92	77	S.W.	92	68	24	77.7	4.92	82	W.
September ...	94	70	24	81.5	6.60	74	S.W.	90	67	23	78.1	14.12	82	S.W.
October ...	102	71	31	84.5	1.88	70	S.W.	95	65	30	80.3	4.74	82	S.W.
November ...	101	71	30	86	Nil	68	S.W.	99	66	33	81.8	.23	70	W.
December ...	98	65	33	83.5	.36	76	S.W.	102	52	50	78.3	1.19	65	W.
Year ...	105	59	46	84	55.77	71	S.W.	102	52	50	80	65.18	75	S.W.

Yola.

Katagum.

January ...	99	58	41	79	Nil	36	N.	97	41	56	70	Nil	40	E.
February ...	104	65	39	86	"	40	N.	105	48	57	78	"	31	E.
March ...	107	72	35	89	.35	50	W.	108	62	46	85	"	30	E.
April ...	103	69	34	85	4.33	64	N.W.	107	61	46	88	.11	38	W.
May ...	101	69	32	83	3.90	68	N.W.	107	67	40	88	3.98	54	S.
June ...	92	66	26	79	10.13	79	W.	99	69	30	82	4.05	70	S.W.
July ...	90	66	24	76	6.23	78	W.	95	67	28	81	4.02	72	S.W.
August ...	90	67	23	77	7.56	80	W.	92	67	25	78	6.32	76	S.W.
September ...	90	67	23	78	8.23	76	N.W.	99	67	32	81	4.17	71	S.W.
October ...	96	68	28	81	3.35	76	N.	105	62	43	81	.33	50	E.
November ...	98	63	35	82	Nil	57	N.&N.E.	105	54	51	76	Nil	34	E.
December ...	96	61	35	78	.18	48	N.E.	101	52	49	73	.05	32	E.
Year ...	107	58	49	81	44.26	63	N.	108	41	47	80	23.03	50	E.

Ibi.

Nafada.

January ...	101	56	45	80	Nil	56	N.E.	100	46	54	71	Nil	36	N.E.
February ...	103	59	44	85	.70	57	S.W.	105	57	48	80	"	29	N.E.
March ...	103	72	31	87	2.75	65	S.W.	110	54	56	86	"	40	N.E.
April ...	101	69	32	83	6.40	72	S.W.	108	61	47	87	3.59	51	N.
May ...	97	69	28	81	8.48	76	S.W.	107	70	37	87	1.29	49	N.E.
June ...	95	68	27	79	5.23	79	S.W.	102	68	34	82	5.12	66	S.W.
July ...	92	68	24	79	5.01	79	S.W.	94	63	31	80	8.66	72	S.W.
August ...	92	69	23	79	7.57	79	S.W.	92	62	30	78	10.82	81	N.E.
September ...	92	69	23	79	8.89	79	S.W.	96	63	33	79	6.89	77	S.W.
October ...	99	70	29	82	7.49	77	S.W.	102	56	46	80	.90	68	W.
November ...	98	65	33	81	Nil	76	S.W.	102	51	51	77	Nil	52	N.E.
December ...	97	58	39	79	.78	55	N.E.	101	49	52	73	"	53	N.E.
Year ...	103	56	47	81	53.30	71	S.W.	110	46	64	80	37.27	56	N.E.

METEOROLOGICAL RETURN FOR THE YEAR 1909.

Kontagora.

Maiduguri.

MONTH.	TEMPERATURE.				RAINFALL.		Wind.	TEMPERATURE.				RAINFALL.		Wind.
	Shade Maximum.	Shade Minimum.	Range.	Mean.	Amount in inches.	Degree of Humidity.		Shade Maximum.	Shade Minimum.	Range.	Mean.	Amount in inches.	Degree of Humidity.	
January ...	99	54	45	78	Nil	32	E.	100	49	51	73	Nil	38	N.E.
February ...	102	59	43	83	"	44	S.W.	107	53	54	81	Nil	34	N.E.
March ...	104	67	37	86	2.51	57	S.W.	112	58	54	89	Nil	39	E.N.E.
April ...	99	64	35	83	6.42	67	S.	109	66	43	89	1.01	57	S.W.
May ...	98	70	28	82	2.02	63	S.	112	71	41	92	.75	68	S.W.
June ...	92	69	23	80	6.22	73	S.W.	102	69	33	86	4.04	84	S.W.
July ...	90	65	25	77	13.33	80	S.W.	99	68	31	81	5.33	83	S.W.
August ...	89	65	24	77	13.12	82	S.W.	94	67	27	80	12.06	86	S.W.
September ...	91	67	24	77	12.87	76	S.W.	101	68	33	82	8.66	80	S.W.
October ...	96	63	33	79	3.83	66	S.W.	102	65	37	83	.04	63	S.W.
November ...	99	54	44	78	Nil	41	E.	102	60	42	81	Nil	60	E.
December ...	99	54	45	77	.35	37	N.E.	98	54	44	75	"	46	N.E.
Year ...	104	54	50	80	60.67	60	S.W.	112	49	63	88	31.89	61	S.W.

Kano.

Sokoto.

January ...	90	47	43	68	Nil	34	N.E.	99	54	45	75	Nil	29	N.E.
February ...	96	56	40	76	"	27	N.E.	101	60	41	82	"	27	N.E.
March ...	107	60	47	85	.09	35	S.W.	105	75	30	90	"	32	N.E.
April ...	109	65	44	87	1.75	50	S.W.	109	70	39	89	1.55	51	S.W.
May ...	106	67	39	87	8.70	53	S.W.	106	70	36	88	1.52	54	S.W.
June ...	99	64	35	81	3.71	70	S.W.	100	69	31	83	4.34	65	S.W.
July ...	95	67	28	79	9.01	78	S.W.	92	70	22	80	8.72	70	S.W.
August ...	96	63	33	76	17.72	83	S.W.	92	68	24	76	10.61	76	S.W.
September ...	96	67	29	80	6.83	76	S.W.	98	68	24	76	2.52	71	S.W.
October ...	99	61	38	81	.77	56	S.W.	100	68	32	84	.40	56	W.
November ...	99	52	47	76	Nil	32	N.E.	98	64	34	80	Nil	36	N.E.
December ...	98	53	45	72	.45	39	N.E.	94	55	39	75	"	39	E.N.E.
Year ...	109	47	62	79	49.03	52	S.W.	109	54	55	82	29.72	50	S.W.

Geidam.

Birnin-Kebbi.

January ...	101	46	55	70	Nil	33	N.E.	97	48	49	73	Nil	35	N.E.
February ...	106	51	55	79	"	28	N.E.	102	56	46	80	"	40	N.E.
March ...	110	55	55	87	"	24	N.E.	105	70	35	89	"	39	S.W.
April ...	110	64	46	89	1.05	33	S.W.	104	70	34	88	2.92	47	S.W.
May ...	109	72	37	91	1.42	49	S.W.	102	60	38	84	3.31	73	S.W.
June ...	102	70	32	85	4.39	68	S.W.	95	70	25	82	3.35	75	S.W.
July ...	100	68	32	82	4.79	73	S.W.	96	72	24	81	2.37	80	S.W.
August ...	93	67	26	79	7.70	81	S.W.	87	70	17	77	12.98	91	S.W.
September ...	103	68	35	83	1.83	72	S.W.	92	70	22	80	2.34	76	S.
October ...	107	63	44	85	.08	42	E.	96	70	26	81	.43	63	S.
November ...	105	60	45	82	Nil	28	E.	97	62	35	79	Nil	48	N.E.
December ...	101	53	48	75	.02	38	E.	92	53	39	74	"	45	N.E.
Year ...	110	46	64	82	21.28	47	S.W.	105	48	57	81	27.70	59	S.W.

Bautchi.

Zaria.

January ...	96	49	47	74	Nil	29	E.	98	52	46	72	Nil	31	E.
February ...	100	67	33	89	"	26	N.E.	105	54	51	80	.36	34	E.
March ...	105	68	37	86	"	33	N.E.	101	55	52	86	Nil	39	W.
April ...	104	64	40	83	3.99	55	N.E.	106	64	42	83	3.56	56	S.W.
May ...	100	60	40	80	2.53	58	S.W.	103	65	38	82	5.79	62	S.W.
June ...	94	35	59	76	5.64	68	S.W.	97	64	33	78	6.51	67	S.W.
July ...	92	57	35	74	10.76	79	S.W.	93	64	29	76	13.11	75	S.W.
August ...	89	59	30	76	11.16	82	E&W	90	65	25	75	16.62	79	S.W.
September ...	94	61	33	77	8.73	76	StoSW.	90	63	27	77	6.61	67	S.W.
October ...	96	66	30	79	.42	59	S.W.	100	57	43	79	1.74	64	S.W.
November ...	95	64	31	79	Nil	33	N.E.	101	50	51	76	Nil	43	N.E.
December ...	95	62	33	78	"	35	E.	99	49	50	72	1.50	39	N.E.
Year ...	105	35	70	79	43.23	53	S.W.	107	49	58	78	55.80	55	S.W.

METEOROLOGICAL RETURN FOR THE YEAR 1909:

Ankpa.

Keffi.

MONTH.	TEMPERATURE.				RAINFALL.		Wind.	TEMPERATURE.				RAINFALL.		Wind.
	Shade Maximum.	Shade Minimum.	Range.	Mean.	Amount in inches.	Degree of Humidity.		Shade Maximum.	Shade Minimum.	Range.	Mean.	Amount in inches.	Degree of Humidity.	
January ...	93	57	36	77	·39	71	S.W.	95	58	37	78	Nil	50	E.
February ...	95	62	33	81	Nil	70	W.	100	60	40	81	1·13	51	E.
March ...	96	67	29	81	3·64	79	W.	99	65	34	83	3·12	64	S.W.
April ...	92	67	25	78	8·63	79	W.	103	66	37	81	3·39	71	S.W.
May ...	90	63	27	76	14·02	81	W.	98	66	32	80	4·94	71	S.W.
June ...	88	63	25	75	7·72	84	W.	93	62	31	78	6·52	77	S.W.
July ...	84	65	19	75	4·42	76	S.W.	88	67	21	76	9·10	80	S.W.
August ...	84	65	19	74	8·12	85	S.W.	81	66	22	76	14·14	80	S.W.
September ...	87	64	23	74	10·23	81	S.W.	92	66	26	77	4·48	79	S.W.
October ...	90	65	25	76	8·80	83	S.W.	98	65	33	80	2·20	72	S.W.
November ...	93	64	29	79	Nil	73	S.W.	98	62	36	80	Nil	60	N.E.
December ...	91	56	35	76	·88	67	various	97	57	40	78	„	36	N.E.
Year ...	96	56	40	77	66·85	77	S.W.	103	57	46	79	49·02	66	S.W.

PAUPER CASES TREATED DURING 1909.

Zungeru	...	...	...	310
Lokoja	...	...	...	351
Kano	...	...	...	308
Sokoto	...	...	...	25
Kontagora	...	...	...	59
Birnin Kebbi	...	...	...	34
Zaria	...	...	...	79
Katagum	...	...	...	118
Geidam	...	...	...	524
Maiduguri	...	...	...	389
Nafada	...	...	...	29
Bautchi	...	...	...	293
Keffi	...	...	...	14
Yola	...	...	...	79
Ibi	...	...	...	217
Bassa	...	...	...	135
Ilorin	...	...	...	96
Baro	...	...	...	63
Baro-Kano Railway	...	...	...	113
Katsena-Allah	...	...	...	27
Katsena	...	...	...	204
Total				3467



Nosological Table Northern Nigeria, 1909.

Diseases.	Europeans.					Natives.				
	Remained at end of 1908.	Yearly Total.		Total cases treated.	Remaining at end of 1909.	Remained at end of 1908.	Yearly Total.		Total cases treated.	Remaining at end of 1909.
		Admissions	Deaths				Admissions	Deaths		
Blackwater Fever	13	3	13	...	...	2	...	2	...
Beri-Beri	2	...	1	2	...
Cerebro-spinal Fever	2	2	2	...
Chicken Pox	6	...	6	...
Cow Pox	18	...	18	1
Diphtheria	1	1	1	...	...	...	...	...	...
Dysentery ...	1	31	...	32	...	8	678	54	686	16
Enteric Fever	2	...	2	...	...	1	...	1	...
Enteritis infective	2	...	2	...	...	4	2	4	...
Erysipelas	1	...	1	...	...	...	...	...	...
German measles	4	...	4	...	...	...	...	...	...
Gangrene	1	...	...	1	...
Gonorrhoea	1	...	1	...	43	1713	...	1756	38
Influenza	8	...	8	1	...	28	...	28	2
Leprosy	1	22	...	23	1
Madura Disease	1	...	1	...
Malarial Fever ...	5	443	...	448	4	2	1715	9	1717	13
Measles	1	...	1	...	...	23	...	23	...
Mumps	7	...	7	...
Osteo-myelitis	1	2	...	3	...
Pneumonia	1	...	1	...	5	142	34	147	4
Pyæmia	2	2	2	...
Pyrexia of uncertain origin	30	...	30	1	...	94	2	94	...
Rheumatic Fever	8	...	8	1	7	676	2	683	9
Septicaemia	3	3	3	...
Sleeping Sickness	7	...	7	...
Small-Pox	80	5	80	9
Syphilis	1	...	1	...	70	437	1	507	89
Tetanus	1	1	1	...
Tuberculosis	5	1	5	1
Yaws	2	102	...	104	1
Anæmia ...	1	47	...	48	2	1	96	5	97	1
Debility	11	...	11	...	3	66	7	69	...
Gout	3	...	3	1	...	...	...	...	...
Tongue Tie	1	...	1	...
New growths non-malignant	...	1	...	1	...	...	7	...	7	1
Cyst	2	...	2	...	...	2	...	2	...
Effects of Parasites
Trematoda	1	...	1	...
Bilharzia	3	...	3	...
Cestoda	4	...	4	...	2	321	3	323	1
Guinea worm	10	1051	...	1061	14
Nematoda	1	17	...	18	...
Ankylostomiasis	8	2	8	...
Filaria Loa	1	...	1	...	...	...	...	...	...
Jigger	6	129	...	135	4
Favus	1	...	1	...
Ringworm	13	...	13	...	...	81	...	81	2
Tinea Imbricata	2	...	2	...
Tinea versicolor	1	...	1	...	...	5	...	5	...
Scabies	1	...	1	...	...	14	...	14	...
Pediculosis	1	...	1	...
Craw Craw	10	1013	...	1023	15
Effects of Injuries ...	2	80	...	82	1	119	5031	3	5150	77
Burns	3	...	3	...	1	87	7	88	2
Heatstroke	2	...	2	...	...	3	1	3	...
Sunstroke	25	1	25	...	...	7	...	7	...
Effects of Lightning	1	1	1	...
Contused wounds	1	...	1	...	...	3	...	3	2
Punctured wounds	1	...	1	...	...	...	...	...	...
Gunshot wounds	3	1	3	...	...	8	1	8	...
Arrow wounds	1	1	1	...	...	7	...	7	...
Spear and sword wounds	9	...	9	...
Strains	9	...	9	...	...	70	...	70	1
Dislocations	1	...	1	...	...	4	...	4	1

Nosological Table (continued.)

Diseases.			Europeans.					Natives.				
			Remained at end of 1908.	Yearly Total.		Total cases treated.	Remaining at end of 1909.	Remained at end of 1908.	Yearly Total.		Total cases treated.	Remaining at end of 1909.
				Admissions	Deaths				Admissions	Deaths		
Rupture of urethra	...	...	...	...	...	...	...	2	...	2	...
Fractures	...	2	6	...	8	...	1	82	5	83	7	
Amputation	...	...	...	...	...	...	1	1	...	2	...
Foreign Body in Eye	...	...	2	...	2	...	...	9	...	9	...
" " " Ear	...	...	2	...	2	...	...	2	...	2	...
Effects of Poisons Alcohol	...	...	...	1	...	...	...	...	...	...	...
Sulphonal	...	...	1	1	1	...	...	...	...	...	...
Ptomaine	...	...	5	...	5	...	...	...	...	...	...
Irritants	...	...	...	...	...	...	1	...	...	1	...
Snake-bites	...	...	...	...	...	...	27	1	27	...	...
Insects-bites	...	...	3	...	3	...	51	...	51	...	...
Dog bite	...	...	...	...	...	...	1	...	1	...	...
Nervous Diseases	...	...	...	...	...	...	...	...	...	...	...
Neuritis	...	1	1	...	2	...	4	...	4	1	...	
Meningitis	...	...	...	...	...	...	1	1	1	...	...
Sclerosis	...	...	1	...	1	...	...	...	...	...	...
Cerebral Hæmorrhage	...	...	...	...	...	...	1	1	1	...	...
Hyperæmia of brain	...	...	...	1	...	...	1	...	1	...	...
Apoplexy	...	...	1	...	1	...	...	...	...	...	...
Paralysis	...	...	1	...	1	...	7	...	7	...	...
Torticollis	...	...	...	...	...	...	2	...	2	...	...
Telegraphist cramp	...	...	...	...	...	...	1	...	1	...	...
Convulsions	...	...	...	...	...	...	1	...	1	...	...
Epilepsy	...	...	...	...	...	...	9	...	9	...	...
Vertigo	...	...	1	...	1	...	4	...	4	...	...
Headache	...	...	2	...	2	1	97	...	98	...	...
Neuralgia	...	...	9	...	9	...	79	...	79	1	...
Sciatica	...	...	2	...	2	...	6	...	6	...	...
Hiccup	...	...	...	...	...	...	1	...	1	...	...
Neurasthenia	...	...	5	...	5	1	4	...	4	...	...
Mania ...	...	...	...	...	...	1	1	1	3	...	...
Insanity	...	...	...	...	...	...	2	...	2	...	...
Dementia	...	...	...	...	...	...	2	...	2	1	...
Insomnia	...	...	1	...	1	...	...	...	...	...	...
Amnesia	...	1	...	...	1	...	...	...	...	...	...
Diseases of the Eye	...	...	...	...	...	...	...	...	...	...	...
Conjunctivitis	...	...	13	...	13	10	597	...	607	6	...
Keratitis	...	...	...	...	...	...	4	...	4	...	...
Ulcer of cornea	...	...	...	...	...	...	19	...	19	...	...
Opacity of Cornea	...	...	...	...	...	...	1	...	1	...	...
Scleritis	...	...	...	...	...	...	2	...	2	...	...
Iritis ...	...	...	1	...	1	...	17	...	17	1	...
Choroiditis	...	...	...	...	...	...	1	...	1	...	...
Hypopyon	...	...	...	...	...	...	1	...	1	1	...
Cataract	...	...	...	...	...	...	3	...	3	...	...
Hemianopia	...	...	...	...	...	...	1	...	1	...	...
Myopia	...	...	...	...	...	...	2	...	2	...	...
Lacrymal abscess	...	...	...	...	...	...	1	...	1	...	...
Blepharitis	...	...	1	...	1	...	16	...	16	...	...
Sty ...	...	...	3	...	3	...	8	...	8	...	...
Entropion	...	...	...	...	...	...	1	...	1	...	...
Diseases of the Ear	...	...	...	...	...	...	...	...	...	...	...
Inflm. of Ext. meatus	...	...	10	...	10	1	53	...	54	...	...
Impacted Cerumen	...	...	5	...	5	...	22	...	22	...	...
Infm. of Middle Ear	...	...	2	...	2	...	67	...	67	...	...
Tinnitus	...	...	1	...	1	...	...	...	...	...	...
Diseases of the Nose	...	...	...	...	...	...	...	...	...	...	...
Rhinitis	...	...	13	...	13	...	39	...	39	...	...
Naso Pharyngeal Catarrh	...	...	...	...	...	3	1	...	4	...	...
Diseases of Circulatory System	...	...	...	...	...	...	...	...	...	...	...
Pericarditis	...	...	...	...	...	...	2	2	2	...	...
Endocarditis	...	...	...	...	...	1	5	2	6	...	...
Valvular Disease	...	...	2	...	2	1	10	3	11	...	...
Degeneration of heart	...	...	2	...	...	...	1	1	1	...	...
Effects of strain of heart	...	...	...	...	...	...	3	...	3	...	...

Nosological Table (continued.)

Diseases.	Europeans.					Natives.				
	Remained at end of 1908.	Yearly Total.		Total cases treated.	Remaining at end of 1909.	Remained at end of 1908.	Yearly Total.		Total cases treated.	Remaining at end of 1909.
		Admissions	Deaths				Admissions	Deaths		
Syncope	4	2	4	...
Disordered action of heart	3	...	3	...	...	9	...	9	...
Cardiac atony	2	...	2	...	...	3	...	3	...
Arterial Sclerosis	1	...	1	...	...	2	...	2	...
Phlebitis	1	...	1	...
Varix	1	...	1	...	...	7	...	7	...
Diseases of the Respiratory System
Asthma	8	...	8	...	...	4	...	4	...
Laryngitis	7	...	7	...	...	27	1	27	1
Tracheitis	1	...	1	...	...	2	...	2	...
Bronchitis	32	...	32	3	4	1087	3	1091	35
Phthisis	12	2	12	...
Pleurisy	3	...	3	...	3	70	3	73	...
Diseases of Digestive System
Stomatitis	3	...	3	...	...	26	...	26	1
Ulceration of mouth	1	...	1	...	...	3	...	3	...
Dental Caries	13	...	13	...	...	60	...	60	1
Gum-boil	2	...	2	...	...	7	...	7	...
Toothache	4	...	4	...	...	37	...	37	1
Glossitis	1	...	1	...	...	2	...	2	...
Sore-throat	5	...	5	...	...	13	...	13	...
Tonsillitis	17	...	17	...	1	52	...	53	...
Pharyngitis	2	...	2	...	...	27	...	27	...
Ulceration of Pharynx	1	...	1	...	...	...	...	...	...
Gastritis	47	...	47	...	...	273	1	273	1
Melena	1	...	1	...
Gastrectasis	1	...	1	...	...	2	...	2	...
Indigestion	37	...	37	...	...	205	...	205	1
Vomiting	1	...	1	...
Gastralgia	1	...	1	...	...	18	...	18	...
Enteritis	21	...	21	...	...	26	1	26	...
Appendicitis	1	...	1	...	...	3	2	3	...
Colitis	14	...	14	1	...	32	3	32	...
Hernia	26	1	26	...
Intussusception	1	...	1	...
Obstruction	1	...	1	...
Diarrhoea	46	...	46	...	6	757	10	763	2
Constipation	27	...	27	...	2	942	...	944	1
Colic	8	...	8	...	...	247	...	247	3
Ischio-rectal abscess	1	...	1	...
Anal Fistula	1	...	1	...
Piles	14	...	15	...	1	12	...	13	1
Hepatitis	9	1	9	...	1	11	3	12	...
Liver abscess	1	...	1	...	...	...	...	...	...
Congestion of Liver	18	...	18	1	1	7	...	8	...
Lardaceous Liver	1	1	1	...
Jaundice	1	...	1	...	...	8	...	8	1
Cholangitis	1	...	...	...	...	...	...	...
Peritonitis	5	4	5	...
Diseases of Lymphatic System
Splenitis	3	...	3	...
Congestion of Spleen	2	...	2	...
Rupture of Spleen	1	1	1	...
Inflm. of Lymphatic glands	19	...	19	...	2	156	...	158	3
Suppuration of „ „	...	1	...	1	1	...	4	...	4	...
Lymphangitis	4	...	4	...	...	20	...	20	...
Lymphangiectasis	1	...	1	...
Elephantiasis	2	...	2	...
Diseases of Genito Urinary System
Nephritis	1	1	1	...	...	3	2	3	...
Bright's disease	3	...	3	...
Renal calculus	1	...	1	1	...	1	...	1	...
Cystitis	8	...	8	...	...	15	2	15	1
Retention of Urine	3	...	3	1
Incontinence of Urine	1	...	1	...

Diseases.	Europeans.						Natives.					
	Remained at end of 1908.	Yearly		Total cases treated	Remaining at end of 1909.		Remained at end of 1908.	Yearly		Total cases treated.	Remaining at end of 1909.	
		Admissions	Deaths					Admissions	Deaths			
Hæmaturia	1	...	1	...	...	...	2	...	2	...	...
Urethritis	7	...	7	...	...
Gleet	2	...	2	...	...
Stricture of Urethra	...	2	...	2	...	...	...	6	...	6	...	...
Hypertrophy of prostrate	1	...	1	...	...
Phimosis	4	...	4	...	...
Paraphimosis	1	1	1	...	2	...	...
Balanitis	1	...	1	...	...	...	...	...	...	...	...
Soft chancre	1	...	1	...	...	...	69	...	69	1	...
Inflammation of Scrotum	1	...	1	...	...
Hydrocele	18	...	18	...	...
Hæmatocele	1	...	1	...	...
Orchitis	1	...	1	...	3	72	...	...	75	1	...
Epididymitis	4	...	4	...	...
Endometritis	2	...	2	1	...
Vaginitis	1	...	1	...	...
Dysmenorrhœa	1	...	1	...	...
Metrorrhagia	1	...	1	...	...
Abortion	2	...	2	...	...
Missed Labour	2	...	2	...	...
Ectopic gestation	1	1	1	...	...
Retained Placenta	3	1	3	...	...
Mastitis	1	...	1	...	...
Mammary abscess	2	...	2	...	...
Diseases of Organs of Locomotion
Osteitis	1	...	1	...	...
Periostitis	11	...	11	...	...
Arthritis	1	...	1	...	...	...	30	...	30	1	...
Synovitis	3	...	3	...	...	...	104	...	104	1	...
Stiff joints	1	...	1	...	...
Myositis	1	...	1	...	...	...	8	...	8	...	...
Myalgia	13	...	13	...	2	524	...	...	526	10	...
Lumbago	6	...	6	...	...	...	96	...	96	1	...
Adhesions of tendons	1	...	1	...	...
Ganglion	7	...	7	...	...
Bursitis	9	...	9	1	...
Talipes	2	...	2	...	...
Diseases of Connective Tissue
Cellulitis	13	...	13	...	...	...	301	1	301	18	...
Abscess	12	...	12	...	4	492	...	...	496	14	...
Gangrene	1	...	1	...	...
Oedema	4	1	4	...	...
Diseases of The Skin
Erythema	5	...	5	...	...	...	3	...	3	...	...
Urticaria	2	...	2	...	...	...	12	...	12	...	...
Prurigo	1	...	1	...	...
Eczema	8	...	8	...	3	65	...	...	68	4	...
Impetigo	13	...	13	1	...
Boil	18	...	18	1	...	121	...	...	121	1	...
Carbuncle	4	...	4	1	...	2	...	...	2	1	...
Herpes	2	...	2	...	...	12	...	...	12	...	...
Pemphigus	1	1	...	...	2	...	...
Dermatitis	22	...	22	...	...	14	...	...	14	...	...
Psoriasis	3	...	...	3	2	...
Keratosis	4	...	...	4	...	...
Wart	1	...	...	1	...	...
Corn	14	...	...	14	...	...
Veldt sore	1	...	1	...	...	...	...	...	...	...	...
Acne	1	...	...	1	...	...
Prickly heat	3	...	3	...	...	1	...	...	1	...	...
Alopecia	2	...	2	...	...	1	...	...	1	...	...
Onychia	2	...	2	...	...	15	...	...	15	...	...
Whitlow	4	...	4	...	1	30	...	...	31	...	...
Ainhum	4	...	...	4	...	...
Ulceration	15	...	15	...	36	1378	...	...	1414	10	...

Nosological Table (continued.)

Diseases.				Europeans.					Natives.				
				Remained at end of 1908.	Yearly Total-		Total cases treated.	Remaining at end of 1909.	Remained at end of 1908.	Yearly Total.		Total cases treated.	Remaining at end of 1909.
					Admissions	Deaths				Admissions	Deaths		
Minor Surgical Operations	...	...	...	...	1	...	1	...	...	2	...	2	...
Senile decay	...	...	...	...	...	...	...	...	...	3	2	3	...
Undefined	...	...	...	...	2	...	2	...	...	3	...	3	...
Uncertified	...	...	...	...	...	...	...	...	...	...	...	...	...
Drowning	...	...	...	...	...	1	...	...	..	...	...	...	...
Totals	...	...	...	14	1384	14	1398	21	387	22847	214	23234	542

